

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.


Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete If Known		RECEIVED AUG 09 2002 TECH CENTER 1600/2000
				Application Number	10/076,213	
				Filing Date	February 12, 2002	
				First Named Inventor	CHAN, Hak-Kim	
				Group Art Unit	1651	
				Examiner Name		
				Attorney Docket Number	A-60010-1/RFT/DLR	
Sheet	1	of	4			

U.S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

[illegible]

Examiner Signature		Date Considered	02 Apr 04
-----------------------	---	--------------------	-----------

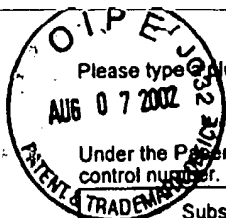
***EXAMINER:** Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English Language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

1088746



Please type plus sign (+) inside this box ☐ +

COPY OF PAPERS
ORIGINALLY FILED

PTO/SB/8B (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

RECEIVED

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Application Number	10/076,213
Filing Date	February 12, 2002
First Named Inventor	CHAN, Hak-Kim
Group Art Unit	1651
Examiner Name	
Attorney Docket Number	A-60010-1/RFT/DLR

AUG 09 2002

TECH CENTER 1600/290

Sheet 2 of 4

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
JL	C1	ARAKAWA, T., et al., "Stabilization of Protein Structure by Sugars," <i>Biochemistry</i> , 21:6436-6544 (1982).	
JL	C2	BACK, J.F., et al., "Increased Thermal Stability of Proteins in the Presence of Sugars and Polyols," <i>Biochemistry</i> , 18(23):5191-5196 (1979)	
JL	C3	BELL, J.H., et al., "Dry Powder Aerosols I: A New Powder Inhalation Device," <i>Journal of Pharmaceutical Sciences</i> , 60(10):1559-1564 (1971).	
JL	C4	BROADHEAD, J., et al., "The Spray Drying of Pharmaceuticals," <i>Drug Development and Industrial Pharmacy</i> , 18(11 & 12):1169-1206 (1992).	
JL	C5	CIPOLLA, D., et al., "Characterization of Aerosols of Human Recombinant Deoxyribonuclease I (rhDNase) Generated by Jet Nebulizers," <i>Pharmaceutical Research</i> , 11(4):491-498 (1994).	
JL	C6	CIPOLLA, D.C., et al., "Assessment of Aerosol Delivery Systems for Recombinant Human Deoxyribonuclease," <i>S.T.P. Pharma Sciences</i> , 4(1):50-62 (1994).	
JL	C7	DOUVAS et al., "Some Effects of Calcium and Magnesium Ions on the Activity of Bovine Pancreatic Deoxyribonuclease A" (1975) <i>Biochem. Biophys. Acta</i> , 395(2), Pages 201-212.	
JL	C8	EICHHORN et al. (1969) <i>J. Biol. Chem.</i> 244(4), "The Interaction of Metal Ions with Polynucleotides and Related Compounds", pp. 937-942	
JL	C9	FRANKS, F., et al., "Materials Science and the Production of Shelf-Stable Biologicals," <i>BioPharm</i> , pp. 38-42 & 55 (1991).	
JL	C10	GEKKO, K., "Calorimetric Study on Thermal Denaturation of Lysozyme in Polyol-Water Mixtures," <i>J. Biochem</i> , 91:1197-1204 (1982)	
JL	C11	GRANDERTON, D., "The Generation of Respirable Clouds Form Coarse Powder Aggregates," <i>Journal of Biopharmaceutical Sciences</i> , 3(1/2):101-105 (1992)	
JL	C12	HUBBARD, R.C., et al., "A Preliminary Study of Aerosolized Recombinant Human Deoxyribonuclease I in the Treatment of Cystic Fibrosis," <i>The New England Journal of Medicine</i> , 326(12):812-815 (1992).	
JL	C13	KASSEM, N.M., et al., "The Effect of Air Flow and Carrier Size on the Characteristics of an Inspirable Cloud," <i>Chelsea Department of Pharmacy, King's College, London SW3 6LX</i> 14P in Auty, R., et al. <i>Br. J. Dis. Ches.</i> , 81:371-380 (1987); and in Richards, R., et al., <i>Eur. Respir. J.</i> , 1:896-901 (1988).	
JL	C14	KASSEM, N.M., et al., "The Influence of Carrier Surface on the Characteristics of Inspirable Powder Aerosols," <i>Chelsea Department of Pharmacy, King's College, London SW3 6LX</i> , 11P in Staniforth, J., et al., <i>J. Pharm. Pharmacol.</i> , 34:141-145 (1982); and in Kassem, N.M., et al., <i>J. Pharm. Pharmacol.</i> , 41(Supp.):13P (1989)	
JL	C15	KIM, C.S., et al., "Particle Deposition in Bifurcating Airway Models with Varying Airway Geometry," <i>J. Aerosol Sci.</i> , 25(3):567-581 (1994).	
JL	C16	LIAO, Ta-Hsiu, et al., "Bovine Pancreatic Deoxyribonuclease A, Isolation of Cyanogen Bromide Peptides; Complete Covalent Structure of the Polypeptide Chain," <i>The Journal of Biological Chemistry</i> , 248(4):1489-1495 (1973).	

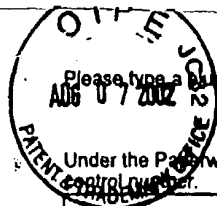
Examiner Signature

Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English Language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231.
DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



COPY OF PAPERS
ORIGINALLY FILED

PTO/SB/8B (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete If Known

Application Number	10/176,213
Filing Date	February 12, 2002
First Named Inventor	CHAN, Hak-Kim
Group Art Unit	1651
Examiner Name	
Attorney Docket Number	A-60010-1/RFT/DLR

RECEIVED

AUG 09 2002

TECH CENTER 600/291

Sheet 3 of 4

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
JL	C17	LIZARRAGA et al., "Multiple Conformations of Deoxyribonucleic A, Their Separation at Alkaline pH and Low Ionic Strength in the Presence of Ca ²⁺ " (1979) Biochem. Biophys. Acta 579(2), Pages 298-302	
JL	C18	LIZARRAGA et al., "The Role of Ca ²⁺ on pH-Induced Hydrodynamic Changes of Bovine Pancreatic Deoxyribonuclease A" (1978) J. Biol. Chem., 253(9), Pages 3191-3195.	
JL	C19	LOURENCO, R.V., et al., "Clinical Aerosols, II. Therapeutic Aerosols," Arch. Intern. Med, 142:2299-2308 (1982).	
JL	C20	LUNDBLAD, et al., "Purification and Partial Characterization of Deoxyribonuclease I from Bovine Parotid Gland," J. Dent. Res., 56(3):320-326 (1977).	
JL	C21	MARKEY, F., "Rapid Purification of Deoxyribonuclease I Using Fast Protein Liquid Chromatography," Elsevier Science Publishes V.V., Federation of European Biochemical Societies, 167(1):155-159 (1989).	
JL	C22	MUMENTHALER, M., et al., "Feasibility Study on Spray-Drying Protein Pharmaceuticals: Recombinant Human Growth Hormone and Tissue-Type Plasminogen Activator," Pharmaceutical Research, 11(1):12-20 (1994).	
JL	C23	NEFSKY, B., et al., "Preparation of Immobilized Monomeric Actin and its Use in the Isolation of Protease-Free and Ribonuclease-free Pancreatic Deoxyribonuclease I," Eur. J. Biochem., 179:215-219 (1989).	
JL	C24	PRICE et al. (1969a) J. Biol. Chem., 244(4), "Properties of Chromatographically Purified Bovine Pancreatic Deoxyribonuclease", pp. 917-923.	
JL	C25	PRICE et al. (196b) J. Biol. Chem., 244(4), "Alkylation of a HisPancreatidine Residue at the Active Site of Bovine Pancreatic Deoxyribonuclease", pp 924-928.	
JL	C26	PRICE et al. (196c) J. Biol. Chem., 244(4), "Effect of Devalent Cations on the Reduction and Re-Formation of the Disulfide Bonds of Deoxyribonuclease", pp 929-932.	
JL	C27	PRICE, P.A., "The Essential Role of Ca ²⁺ in the Activity of Bovine Pancreatic Deoxyribonuclease" (1975) J. Biol Chem., 250(6) Pages 1981-1986	
JL	C28	SHELLMAN, J.A., Ann. Rev. Biophys. Chem. Rev., 16, "The Thermodynamic Stability of Proteins", Pages 115-137A	
JL	C29	SCHMID, R.D., "Stabilised Soluble Enzymes," Advances in Biochemical Engineering, 12:42-118 (1979).	
JL	C30	SHAK, S., et al., "Recombinant Human DNASE I Reduces the Viscosity of Cystic Fibrosis Sputum," Proc. Natl. Acad. Sci. USA, 98:9188-9192 (1990)	

Examiner Signature	<i>Janet Over</i>	Date Considered	<i>02 Apr 04</i>
--------------------	-------------------	-----------------	------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English Language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Trade
DO NC
1088746